Author(s)/participant(s): Dr. John Lacey, Maxine Rasmussen, Jon Siddoway & Rick Bandy
Contact for lead author: Maxine Rasmussen, Glasgow Area Office, MT Reference site used? No
Date: 3/30/05 MLRA: 53AE Ecological Site: Subirrigated 10-14" p.z. This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

Indicators. For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above- and below-average years for **each** community within the reference state (when appropriate), and (3) cite data. Continue descriptions on separate sheet if needed. **Weight factors** are 0.5, 1.0 or 2.0. The default factor is 1.0. A maximum of 8 indicators may be changed to 0.5 or 2.0. The rest remain at 1.0.	**Wgt. Factor**
1. Number and extent of rills: Rills should not be present in any of the State 1 reference plant communities.	1.0
2. Presence of water flow patterns: Water flow patterns should not be observable in any of the State 1 reference plant communities.	1.0
3. Number and height of erosional pedestals or terracettes: Pedestals or terracettes would essentially be nonexistent in any of the State 1 reference plant communities.	1.0
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Bare ground would essentially be nonexistent in HCPC. Bare ground should be less than 2" in diameter. If in plant community A, less than 5% of the soil surface can be exposed. In plant community B, 10% bare ground may be exposed.	1.0
5. Number of gullies and erosion associated with gullies: Gullies are not associated with any of the State 1 reference plant communities.	1.0
6. Extent of wind scoured, blowouts and/or depositional areas: Wind scoured, blowouts and/or depositional areas are not associated with any of the State 1 reference plant communities.	1.0
7. Amount of litter movement (describe size and distance expected to travel): Litter movement is not expected with any of the State 1 reference plant communities.	1.0
8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values for both plant canopy and interspaces, if different):): Stability class anticipated to be 5 or 6 under plant canopy.	1.0
9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different): The surface layer varies from 0-3" deep to 0-12" deep. The color is usually dark brown. Surface textures include loam, silt loam, clay loam, or sandy loam. Soil organic matter ranges from 2-4%.	1.0
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: In HCPC, 90-95% plant canopy and 80-85% basal cover with small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. Healthy, deep rooted native grasses enhance infiltration and reduce runoff. Infiltration rate is moderate to very slow. If in plant community A, 90-95% plant canopy and 70-80% basal cover with small gaps between plants will still reduce raindrop impact and decrease overland flow. If in plant community B, 40-70% plant canopy and 50-75% basal cover with moderate gaps between plants, intensifies raindrop impact and increases overland flow.	1.0
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): No compaction layer or soil surface crusting should be evident in either of the State 1 plant communities.	1.0
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: >>, >, = to indicate much greater than, greater than, and equal to) :): HCPC: Tall, warm season rhizomatous grasses > mid-stature, cool season rhizomatous grasses > mid-stature cool season bunch grasses > forbs >shrubs. **Plant community A**: Mid-stature, cool season rhizomatous grasses> mid-stature cool season bunch grasses > tall, cool season bunch grasses > forbs > shrubs. **Plant community B:** Mid-stature, cool season rhizomatous grasses > mid-stature cool season bunch grasses > sedges and rushes > forbs > shrubs.	1.0
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Plant mortality and decadence very low in HCPC and Plant community A. In periods of drought, all plants would exhibit decadence in the state 1 reference communities.	1.0
14. Average percent litter cover (50-55%) and depth (0.5 to 1.0 inches). Litter cover is in contact with soil surface. Litter decreases in Plant community A to 40-50% and depth is reduced to 0.5 inch.	1.0
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 3500 - 5000 #/acre from Plant community A to HCPC in the State 1 reference community.	1.0
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "will continue to increase regardless of the management of the site" and may eventually dominate the site: Smooth bromegrass, Kentucky bluegrass, Canada bluegrass, Baltic rush, leafy spurge and Canada thistle.	1.0
17. Perennial plant reproductive capability: All species are capable of reproducing in HCPC. In Plant community A, plant seedlings will be weighed in favor of marginal and undesirable species. Replacement of desirable species will be very few.	1.0